## **ABSTRACT**

It is not possible to store heat of a domestic hot water supply level at a high density. If thermal storage temperature is T, variation in enthalpy in a chemical reaction is  $\Delta H$ , variation in entropy is  $\Delta S$ , and variation in free energy is  $\Delta G$ , a thermal storage material satisfying a relationship of  $T\Delta S \geq \Delta G$  is used under a condition of  $\Delta H > 0$  so as to promote a reaction for putting the thermal storage material in a thermal storage reaction portion in an energy storing state by having supplemental energy added by an electrode portion when putting the thermal storage material in the energy storing state by decomposing or separating it.